

UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF WASHINGTON  
AT TACOMA

DREW MACEWEN, ANDREW BARKIS,  
CHRIS CORRY, BRANDON VICK, KELLY  
CHAMBERS, MICHAEL MCKEE, FRAN  
WILLS, BRUCE RUSSELL, PHIL  
FORTUNATO, DAVE McMULLAN, AND  
ISAAC VELLEKAMP,

*Plaintiffs,*

v.

JAY INSLEE, in my official capacity as the  
Governor of Washington,

*Defendant.*

No. 3:20-cv-05423

DECLARATION OF VINCENT SEAMAN,  
PHD IN SUPPORT OF MOTION FOR  
PRELIMINARY INJUNCTION

I, Vincent Seaman, make the following declaration under penalty of perjury:

1. I am a public health professional with over 40 years of experience in healthcare delivery, epidemiology, and vaccine-preventable diseases.
2. I was a practicing pharmacist in the state of California for 15 years, the last five of which involved establishing one of the first home infusion pharmacies in the U.S.
3. In this role I oversaw the construction and operation of a Class-100 clean room - used to prepare sterile intravenous medications - which required a rigorous cleaning/sanitization protocol and daily sterility testing.
4. I spent 7 years working at the U.S. Centers for Disease Control and Prevention (CDC) where I received training as a field epidemiologist and led domestic public health investigations assessing potential adverse health impacts from toxic waste and other environmental hazards.

- 1 5. From 2010-13 I was detailed to the WHO EPI offices in Liberia and Nigeria to provide technical  
2 support for polio eradication and other vaccine-preventable disease elimination.
- 3 6. In 2011, I oversaw the establishment of the National Polio Emergency Operations Center in  
4 Abuja, which later played a key role in stopping the 2014 Ebola outbreak.
- 5 7. I currently work for a non-profit Foundation where I manage a portfolio of over \$20 million  
6 focused on polio eradication, disease surveillance, and vaccination campaign effectiveness in  
7 the African region.
- 8 8. This project involves extensive field work to assess the efficacy and quality of vaccination and  
9 surveillance programs, and a close working relationship with global partners such as WHO and  
10 CDC.
- 11 9. Based on my experience, I have in-depth knowledge and understanding of infectious disease  
12 transmission, surveillance and treatment protocols.
- 13 10. I have participated in outbreak responses at CDC (S. Typhi, E. Coli) and in Nigeria (polio,  
14 Ebola) that included epidemiologic investigations, enhanced surveillance, risk assessment, and  
15 contact tracing.
- 16 11. This background gives me an informed perspective on the current COVID-19 outbreak and the  
17 ability to provide expert guidance on response protocols and strategies. I have reviewed and  
18 will provide comments on the following:
  - 19 a) CDC MMWR: Coronavirus Disease 2019 Case Surveillance — United States, January  
20 22–May 30, 2020
  - 21 b) Washington State COVID-19 Death Statistics
  - 22 c) High SARS-CoV-2 Attack Rate Following Exposure at a Choir Practice — Skagit County,  
23 Washington, March 2020; MMWR/May 15, 2020 /Vol. 69 / No. 19
  - 24 d) Comparative Risk Analysis

12. I reviewed the recent CDC MMWR Surveillance Report (Coronavirus Disease 2019 Case Surveillance — United States, January 22–May 30, 2020) describing the demographics, hospitalization, ICU admission and mortality, including the existence of co-morbidity factors, for 1,320,488 cases reported through May 30, 2020.
13. A few caveats should be pointed out before assessing the data:
- a) Reported cases do not represent all cases, since in many states only high-risk individuals or those exhibiting COVID-like symptoms were being tested during that period. This excludes the actual COVID-19 cases that were either asymptomatic, or who had symptoms that did not require hospitalization. Available data suggests that this latter group comprises 20 - 50+% of all cases. These additional cases would effectively decrease any hospitalization or mortality rates calculated from this data.
  - b) In each category (Hospitalization, ICU Admission, Death, and Underlying Conditions) data was only available for a sub-set of the total cases. For example, Hospitalization status was known for 600,860 (46%) of the 1,320,488 cases. Among 184,673 hospitalized patients, the presence of underlying health conditions was known for 96,884 (53%). It is likely that data on Hospitalization, ICU Admission, Death, and Underlying Conditions is more often available for seriously ill patients through hospital/medical records, while for patients not admitted to the hospital there would only be the data collected when they were tested. This data bias tends to reduce the number of records from individuals who were not hospitalized - and thus were not admitted to the ICU and did not die.
  - c) In cases where a complete record is available, there are often gaps where certain data is missing (*i.e.* no co-morbidity factors listed when they do, in fact exist), while there are much fewer incidents where incorrect information is entered (*i.e.* co-morbidity factors listed when they do not, in fact exist).
14. Pertinent to the situation in the state of Washington is the relative risk of individuals based on their age and whether or not co-morbidity factors exist.

- 1 15. The MMWR data shows that of the 40,243 deaths that occurred where co-morbidity status  
2 was known, 0.6% occurred in individuals under the age of 60 who had no underlying conditions,  
3 while 99.4% occurred in individuals who were over the age of 60 and/or had one or more  
4 underlying conditions.
- 5 16. Similar comparisons can be made for hospitalizations and ICU admissions.
- 6 17. This clearly establishes the latter as a “high-risk” group for COVID-19 deaths.
- 7 18. In comparison, for an average year approximately 16% of the influenza deaths are in persons  
8 under 60.
- 9 19. This means seasonal influenza poses a 25-fold increase in risk for that group compared to  
10 COVID-19.
- 11 20. For several reasons, comparisons between COVID-19 risk and seasonal influenza risk cannot  
12 be precise. In brief, flu reporting and COVID reporting are not done the same way. Reporting  
13 of infection, hospitalization, and death totals for seasonal flu are based in part on estimates and  
14 extrapolations, in turn drawn from decades of experience with that disease. Additionally, the  
15 age brackets for CDC’s national reporting are not the same as Washington’s COVID-19  
16 reporting brackets.
- 17 21. COVID reporting is based to a greater extent on actual testing, albeit (as noted above) testing  
18 mostly people who present to health care as symptomatic. Where broader testing has been  
19 done, it uniformly reveals a significant percentage of asymptomatic infections, meaning that  
20 exclusively relying on positive test results undoubtedly understates the spread of COVID while  
21 overstating the negative health effects on those infected.
- 22 22. Nonetheless, as more information about COVID has been learned, some meaningful  
23 comparisons can be made.
- 24 23. Based on review of the state’s COVID data website, through June 15, 2020, Washington state  
25 had suffered zero deaths from COVID in people under 20, a rate of zero per 100,000. By  
26 comparison, according to CDC’s 2018 data, the national death rate from seasonal flu was 1.6  
27 flu deaths per 100,000 in that age cohort.

24. In the 20-39 cohort, Washington has suffered an annualized rate of 0.72 COVID deaths per 100,000, compared to a national rate of 2 per 100,000 for flu in 2018.
25. In the 40-59 cohort, Washington has suffered an annualized rate of 5.92 COVID deaths per 100,000, compared to a national rate of 10.6 per 100,000 for flu in 2018.
26. In the 60-79 cohort, Washington has suffered an annualized rate of 33.03 COVID deaths per 100,000, compared to a national rate of 40.6 per 100,000 for flu in 2018.
27. In the 80+ cohort, Washington has suffered an annualized rate of 233.28 COVID deaths per 100,000, compared to a national rate of 423 per 100,000 for flu in 2018.
28. I reviewed the demographics for the reported COVID-19 cases in Washington state as of June 15, 2020. Of the 1226 reported deaths, 1099 (90%) were 60 years or older.
29. While Washington state does not report on co-morbidity factors associated with COVID-19 deaths, based on the MMWR report described in #1 most of the other deaths are likely associated with one or more underlying causes. Thus, the available data from Washington state appears to be in agreement with the CDC Report summarized in #1.
30. I reviewed the report of a COVID-19 outbreak due to a choir practice in Mt. Vernon, WA (High SARS-CoV-2 Attack Rate Following Exposure at a Choir Practice — Skagit County, Washington, March 2020; MMWR/May 15, 2020 /Vol. 69 / No. 19).
31. In summary, out of 61 persons attending a choir practice on March 10, 2020, 33 were later confirmed positive for COVID-19, while an additional 20 were assumed to be cases based on presenting symptoms.
32. The practice included 2.5 hours of singing at close quarters, sharing refreshments, and general socialization. The median age of the presumed cases was 66, while 76% were over the age of 65.
33. Thirty-two percent (13) had at least one underlying condition.
34. Out of the 51 suspected cases, 3 were hospitalized and 2 died. All three had 2 or more co-morbidity factors.
35. Reports from the news media indicate the individuals who died were both over 80 years old.

1 36. While the choir outbreak demonstrates the relatively high transmission rate of the COVID-19  
2 virus, it also is strong evidence confirming COVID-19 is a risk to a specific group of individuals:  
3 those over the age of 60 or who have at least one co-morbidity factor.

4 37. This is the same group identified by the CDC MMWR study in #1. It is also worth noting that  
5 all individuals who attended the choir practice were likely exposed, given the time and close  
6 proximity of the practice conditions. Thus 8 persons (13%) were asymptomatic or did not  
7 contract a clinical case of COVID-19.

8 38. To put the above analyses in context, it is important to compare the danger of COVID-19  
9 exposure in the low risk group (under 60 with no co-morbidity factors) to other risks.

10 39. Based on the above analyses, it is clear that a well-defined and relatively small sub-population  
11 is most at risk for serious illness and/or death from COVID-19.

12 40. In the rest of the population, the vast majority of people will have either minor or no symptoms.  
13 Even with continued social-distancing, mask-wearing and limiting the size of gatherings, the  
14 COVID-19 virus will not disappear.

15 41. For that to occur, transmission must be stopped, which can only happen if a sufficient number  
16 of people in a community are immune (herd immunity).

17 42. This may be accomplished if and when a vaccine is available, but there is no guarantee that the  
18 vaccine will be 100% effective in all people, nor can we be assured that everyone will accept the  
19 vaccine.

20 43. Thus, until we reach herd immunity levels (whether by vaccination or by exposure to the virus)  
21 the virus will still circulate, and the at-risk populations remain at risk.

22 44. Given the economic, social, psychological and spiritual damage caused by the current  
23 pandemic response in Washington state, it would be prudent, and in line with the most credible  
24 scientific data available, to allow the non-high-risk individuals to congregate and conduct their  
25 affairs without restriction.

26 45. This will allow a natural development of herd immunity in a very short time (as little as 2  
27 months) and should not result in an excessive burden of critically ill individuals.

- 1 46. The at-risk population should continue to practice self-isolation, and measures can be taken  
2 within families to protect high-risk individuals in the home.
- 3 47. Social services can also be provided to the at-risk group to ensure maximum protection. To  
4 continue the current Phased approach will only prolong the inevitable and will incur a huge  
5 cost in personal suffering.
- 6 48. I have reviewed the Washington state phased approach to re-opening, which requires counties  
7 to meet certain thresholds. Two key elements for measuring or modeling readiness are case  
8 counts and contact tracing.
- 9 49. Case counts cannot be reliably measured unless all people, or at the very least a statistically  
10 representative sample of the entire population, can be tested. For most of the outbreak,  
11 Washington state has only tested sick or high-risk individuals, thus missing those with no or  
12 minor symptoms.
- 13 50. In the CDC MMWR study described in #1, only 14% of reported cases were hospitalized,  
14 indicating that a majority have minor-moderate symptoms which would not usually result in  
15 testing under Washington's approach.
- 16 51. When combined with the 20-50% estimate for asymptomatic infections, the number of missed  
17 cases due to lack of testing could be 5-10 times higher than the confirmed positive case counts.
- 18 52. The Mount Vernon Choir exposure is a perfect example of this, where only 33 of 61 persons  
19 were tested, although all were assumed to be exposed and 53 assumed to have had a clinical  
20 case of COVID-19 based on presenting symptoms.
- 21 53. This also occurred in a high-risk population (75% of the members were over 65 years old), which  
22 decreases the likelihood of having an asymptomatic infection.
- 23 54. In this situation, nearly half of the cases would have been missed if only test results were  
24 considered. The modelers use the mortality rate to back-calculate the number of "expected  
25 cases." However, the true mortality rate is not known as it requires one to know the total  
26 number of cases.
- 27



1 55. The local modelers use estimates based on data from other countries where more extensive  
2 testing has been done, but no country has tested a sufficient number of people to establish a  
3 mortality rate for COVID-19.

4 56. In addition, mortality is influenced by many factors—demographics, health conditions, quality  
5 of medical care, etc. —so it is difficult to compare numbers from different countries (or even  
6 states).

7 57. Contact tracing can be a valuable tool when case numbers are low, but the number of contacts  
8 rise exponentially as case numbers rise. Accurate and timely data is also necessary to stop  
9 further transmission (and an increase in contacts).

10 58. In Washington state, the goals are 90% of cases reached within 24 hours of a positive lab result,  
11 and 80% of contacts reached within 48 hours of a positive lab result.

12 59. However, in the Seattle Times article June 14, 2020 (Despite an Army of Workers, Contact  
13 Tracing in Washington is a Challenge), it is noted that “Phone numbers and other key contact  
14 information is missing from roughly 43% of the COVID-19 cases...” in the state’s central  
15 database. This makes an effective contact tracing system impossible, regardless of the number  
16 of trained workers available.

17 60. I provided expert opinion in two COVID related matters earlier this year. The first is *Familias*  
18 *Unidas Por La Justicia, AFL-CIO and United Farm Workers Of America v. Washington State*  
19 *Department Of Labor & Industries And Washington State Department Of Health*, No. 20-2-  
20 00368-29. The second is *In Re: Stemilt Ag Services’ Temporary Worker Housing*  
21 *Management Plan and Variance Application*.

22 61. I am being compensated for my time at my usual rate of \$300/ hr.

23  
24 SIGNED June 19, 2020, at Seattle, Washington.

25  
26  
27 BY: 

VINCENT SEAMAN, PHD